

ART. XXV.—*Contributions to the Flora of Australia,*  
*No. 10.*<sup>1</sup>

BY ALFRED J. EWART, D.Sc., Ph.D., F.L.S.,  
Government Botanist and Professor of Botany in the University of  
Melbourne;

AND

JEAN WHITE, M.Sc.,  
Government Research Scholar.

(With Plates VI.-IX.).

[Read 10th December, 1908].

*BACCKEA EATONIANA*, n. sp., Ewart and White.

A small, much branched, shrubby plant about 5 or 6 inches high, the branches woody and stiff, and covered by a whitish membrane, peeling off on the older branches, leaving a yellowish scaly bark. Leaves about one-sixteenth inch long, glandular, green, almost cylindrical and sessile, blunt at the top, decussate. Flowers solitary, with 2 bracteoles. *Calyx*, 5 sepals, the tube adnate to the ovary, the sepals free, and with a white and membranous border. *Petals* 5, free, orbicular, shortly stalked, white, sinuous at the edge, one-twelfth inch long. *Stamens* 20, rarely 3 to 4 fewer, forming a single ring attached to a projecting ridge connected with the bases of the petals, filaments dilated more or less at the lower end, without any cilia-like appendages at the points of attachment, free from each other, filiform, as a rule 4 stamens situated opposite each petal.

Anthers, bilobed, obovate; stamens not quite so long as the petals. *Gynacium*.—Ovary rough on the outside, 2-celled, the upper part very convex. Style deeply immersed, as long as the stamens. Stigma slightly bilobed.

Youndegin, W. Australia, Alice Eaton, 1894. The specimens were first examined by Mr. Luehmann, who considered its nearest affinity to be *B. pulchella*. Baron Mueller gave it the apparently unpublished name of *B. Eatoniana* (nomen nudum), which is retained in the foregoing description.

CASSINIA ACULEATA, R. Br., var IMBRICATA, F. M. Reader.

This variety, at first called "appressa," and subsequently "imbricata," was recorded in the Vict. Nat., 1905, vol. 22, p. 79. The plant proves, however, to be *Humea squamata*, F. v. M., the new variety being the result of a mistake in identification. As evidence of how easily the best of botanists may go astray with composites of this character, it may be mentioned that Baron Mueller referred his first described species to a new genus (*Haeckeria*), although aware of the existence of the prior genus of *Humea*, and that this particular species, when first collected, was named *Cassinia pholidota*, F. v. M., by Mueller, changed to *Ozothamnus pholidota*, F. v. M. (Fragm., ii., p. 131), given in Bentham's Flora as *Helichrysum pholidotum*, F. v. M., and finally recorded as though it were a new species of *Humea* (*H. squamata*, F. v. M.), in the Fragmenta, xi., p. 86, without any reference to the previous names.

GALIUM PARISIENSE, L., var. AUSTRALE, n. var.

The specimens come nearest to the variety *anglicum* of *G. parisiense*, and have usually 5-7 leaves in the whorls. The flowers, however, show a greater tendency to aggregate in small terminal clusters and the fruits are slightly smaller, dark and slightly roughened with small asperities.

Goroke, Victoria, St. Eloy D'Alton, No. 7; Goulburn R., 1892, W. Gates; Wannan R., below Hamilton, Vict., H. B. Williamson, No. 622 (no date), and same locality, Nov., 1898; Woolooloo, West Australia, Max. Koch, 1906, No. 1646.

It seems surprising that the presence of this plant in Australia has been overlooked so long, but the older specimens of it had been referred to various species of *Galium* and *Asperula* as slender varieties of them, though really quite distinct. The plant is undoubtedly native, the variety not being found elsewhere, but has not been recognised owing to its small flowers and slender character.

GNEPHOSIS BARACCHIANA, n. sp., Ewart and White  
(after P. Baracchi).

A woody herb about 3 inches high. The primary stems unbranched or nearly so. Stems very slightly hairy. Leaves sparsely beset with minute hairs, lanceolate, with pointed tips, about  $\frac{1}{4}$  inch long, very shortly petiolate, entire, alternate. clusters of flower heads globular, terminal, with a short peduncle and provided with 5 to 8 outer foliose bracts not projecting beyond the heads, and one to two layers of inner scarious bracts, none of which exceed the florets in length. Partial heads 1-flowered, the involucre of each floret consists of 6 outer narrow bracts, each provided near the top with a tuft of fairly long hairs, and 3 inner broader and more deciduous bracts; all the bracts are scarious and concave, and all have a midrib which is more pronounced in the outer than in the inner bracts. Receptacle convex, and roughened on the surface by the points of attachment of the florets. Florets hermaphrodite, tubular and 5-merous, the pappus consists of a flattened ring of minute scaly hairs attached to the base of the corolla. Florets somewhat hardened at the base. Anthers distinctly tailed at the base. Style branches truncate. Achene compressed and surrounded by a conspicuous mucilaginous layer, which swells up considerably in water.

Salt swamp near Mission Station, Dimboola. St. Eloy D'Alton.

This plant had been originally referred to *Angianthus*, but there are 9 bracts around each partial head of one flower. It has an external resemblance to *Gnephosis skirrophora*, but is readily distinguished by the leaf-like bracts surrounding the main heads, by the pappus and by the mucilaginous layer on the achene.

HELICHRYSUM TEPPERI, F. v. M. Lake Albacutya, 1903.

St. Eloy D'Alton. From Herbarium, C. Walter, under *Podolepis Lessoni*, Benth.

HIBBERTIA STRICTA, R. Br., var. READERI, A.J.E.

The variety comes nearest to the var. *hirtiflora* of *H. stricta*, but differs in the smaller flowers, more slender and glabrous stems, the leaves glabrous on their upper surfaces, and in general the pubescence less developed. The flowers, instead of the usual 8-12 stamens, have 7-10.

Casterton, 1908. F. M. Reader.

OLEARIA TOPPI, n. sp., Ewart and White (after C. A. Topp).

Shrub freely branching, apparently 1-3 feet high. Leaves  $\frac{1}{2}$  to  $\frac{1}{2}$  an inch long, sessile, linear, flat, somewhat thick, with a slight tendency towards recurving, midrib prominent at the back, slightly rough and glabrous. It differs from *Olearia muricata*, to which it has a superficial resemblance in the conspicuous revolute leaves of the latter. Leaves alternate. Heads terminal, grouped into irregular leafy corymbs, nearly sessile, and surrounded by an involucre of 3 to 5 leaf-like bracts, somewhat scarious at the edges, the bracts of the inner circle are the longest, and those of the outermost circle the shortest. Six to 7 ray florets, disc florets more numerous. 5 merous and slightly exceeding the involucre. Anther tube slightly exerted. Pappus bristles fairly numerous, not quite all the same length. Achenes hairy, greatly compressed, long and narrow.

F. M. Reader, sandy tracts, Shire of Borung, 1904; Dimboola, Mallee Scrub, 1892.

New to Victoria. The specimens were marked provisionally by Mr. Reader as *Aster decurrens*, var. *angustifolia*. It differs from this species, however, in the shorter obtusely linear leaves, the heads usually solitary at the ends of separate branches, usually 1-3 inches long, rather larger and with more numerous imbricated bracts. Achenes silky, hairy, pappus as in *Olearia decurrens*.

MESEMBRYANTHEMUM BICORNE, Sond. (*M. micranthum*, E. and F.).

Moorna, Lower Murray River, 1887, N.S.W.; banks of the Murray, Vict., J. P. Eckert, 1892.

Introduced, but hardly naturalised.

MESEMBRYANTHEMUM SARMENTOSUM, Haw.

This is given in the Kew Index as from S. Africa and Australia. The latter is incorrect, and is apparently given on the authority of a single old but undated specimen from "Dr. F. M. Mueller," marked Australia Felix, but with no other locality. It is evidently a fragment taken from a garden. The plant is not a native of Australia, nor is it even a naturalised alien.

MESEMBRYANTHEMUM TEGENS, F. v. M.

This species, described in the *Fragmenta*, V., 157, as from low meadows near Melbourne, is retained as valid in the Kew Index as an Australian species, and at the Botanical Gardens, Melbourne, but was dropped in the Census, without any reference or reason being given. I was unable, however, to find any species with which it agreed from S. Africa or elsewhere. On reference to Kew, Mr. N. E. Brown reports as follows:—

"It would appear that the name *M. tegens* must stand for the plant sent. It is evidently nearly allied to *M. clavellatum*, Haw. (which is quite distinct from *M. australe*, Forst., with which Bentham united it), but that species has clavate, obtuse-angled leaves and larger, bright violet-purple flowers. From the South African *M. filicaule*, Haw., *M. reptans*, Ait., and *M. crassifolium*, Linn., it is also quite distinct. But there are specimens at Kew of a plant collected by Capt. Wooley Dod on Paarden Island, near Capetown, in 1897, which seems specifically the same as *M. tegens*. This does not appear to be described in the *Flora Capensis*, and no previous collector seems to have gathered it, so it is just possible that it has been introduced there from Australia. The two, however, require to be compared in the living state to make it quite certain that they are identical."

*M. tegens*, F. v. M., therefore, must be added to the Victorian flora, although there is a possibility it may really be of S. African origin.

PHALARIS COMMUTATA, Rosen and Schultz, Toowoomba, Canary Grass.

This unduly belauded fodder grass is considered by the Kew Herbarium to be *Phalaris bulbosa*, L., but by Hackel is considered the type of a new species (*P. stenoptera*, Fedde's Repertorium, v. 1908, p. 333). Several growers report that *P. canariensis* appears commonly when the plant is grown, and there is a possibility that the plant may be a mixed hybrid of *P. canariensis* with *p. arundinacea* and *bulbosa*, the *canariensis* strain predominating, and continually appearing in pure form.

STYPHELIA (SOLENSICIA) ELEGANS, D.C., var BREVIOR, n. var., Max Koch, 1907, Wooroloo, W.A., No. 1347.

The variety has some of the flowers two together in the axil of one leaf. Bentham gives them as solitary in the axils for the type, but even here very occasionally two flowers may occur to one leaf. In addition the flowers are shorter, being  $\frac{1}{2}$  to  $\frac{3}{4}$  inch instead of  $\frac{3}{4}$  to 1 inch, and the upper half of the corolla tube is filled with dense white hairs continued over the inside of the lobes.

The history of the species is curious. Bentham in the Flora Austr. gives it as *S. tenuiflora*, Lindl., and placed it in Sect. II., Soleniscia, which he characterised by the "very slender corolla tube, quite glabrous inside." This latter character is copied from Lindley (Bot. Reg. 25, App., p. 25, 1839), who, however, gives the name as *S. tenuifolia*. De Candolle, Pro. vii., 737, had described the species as *Soleniscia elegans* a year previously, and noted that the inside of the corolla was hairy, and the species was transferred by Sonder (Lehm. Pl. Pr. I., 296) to *Styphelia*. There is, however, no justification for referring the plant to *S. tenuiflora*, Lindl. Lindley did not use this name, he gives a different description, and at a later date

than that given by De Candolle. Mueller (Census) and the Kew Index have both followed Bentham's error, which needs correction.

**THYSANOTUS BENTIANUS**, n. sp., Ewart and White (named after Sir Thomas Bent in recognition of the Grant by the Victorian Government of 1908 of £1000 to Research).

Herbs from one and a-half to 3 inches in height. Roots fibrous, without tubers. Leaves radical, more numerous than those of *Thysanotus triandrus*, which this species somewhat resembles. Leaves much shorter than in *T. triandrus*, and very densely beset with fairly long, rigid hairs, the hairs being more than twice as thick as any of many specimens of *S. triandrus* examined. The leaves are also more cylindrical than those of *T. triandrus*, and also the cells of the palisade parenchyma are longer than they are in *T. triandrus*.

Scapes simple, exceeding the length of the leaves by about half their length, while in *T. triandrus* the scapes are relatively longer. There is usually a single terminal umbel of flowers, the bracts of the inflorescence being much larger and more conspicuous than in *T. triandrus*, but there may be also occasionally a small umbel situated below the terminal one. Flowers much smaller than in *T. triandrus* and pedicels shorter, stamens 3, opposite the petals, the anthers being about the same length as the filaments. Youndeggin, W. Australia, Alice Eaton, 1893.

**TRIGLOCHIN MUCRONATA**, R. Br.

In Bentham's *Flora* (vol. 7, p. 168) this is given as 1-3 inches high, or sometimes double that in luxuriant specimens, and the leaves shorter than the scape. Two forms seem, however, recognisable as varieties which do not agree in these respects.

(a) Variety *longiscapa*, n. var. The leaves are shorter than the scapes, but the latter reach a height of 8-11 inches. Murray, W. Austr., Oldfield.

(b) Variety *longifolia*, n. var. The longer leaves overtop the scapes by 1 or 2 inches and the latter are mostly 5-7 inches long. Cowcowing in lake country. M. Koch, 1904, No. 1144. A specimen from N. of the Stirling's Range, 1887, appears to be a young form of the same variety. Though so much larger than the type, both varieties appear to be annual.

#### URODON.

This genus was founded by Turczaninow (Bull. Soc. Imp. de Nat de Moscou, 1894, iii., p. 16) for a specimen of Drummond's (Coll. iv., No. 21, *Urodon capitatus*), on the basis of the following characters:—

"Calyx two basal bracts, unequally bilabiate, two upper teeth broad, all with setaceous acuminate points. Corolla papilionaceous, petals clawed, standard broad emarginate, carina obtuse, wings slightly shorter. Stamens 10, filaments free. Ovary shortly stalked, biovulate, villous. Style much longer than the ovary, base scarcely dilated, pubescent, the upper part filiform and glabrous, stigma minute."

*Urodon capitatus*. A glabrous branching shrub, flowers instalked involucrate heads, standard and wings red when dry, keel dark purple. Related to *Phyllota* but distinguished by the shape of the calyx, stalked ovary, carina and wings.

At a later date Turczaninow distinguished a second species *U. dasyphyllus* (1853, ii., p. 268) in a specimen from Drummond's Vth. Coll., No. 47, which had been mixed with *Sphaerolobium Drummondii*. The leaves were longer, flowers larger, stems and leaves hairy, etc.

Bentham, evidently on superficial examination only, suppressed the genus and both species, and raised a new species of *Pultenaea* (*P. Urodon*, Benth.). Mueller equally incorrectly transferred these plants to *Phyllota Urodon*, F. v. M. The genus *Urodon*, though intermediate between *Phyllota* and *Pultenaea*, is quite distinct from both. It resembles *Pultenaea* in the shortly-stalked ovary, the thread-like style not dilated below the middle, and the flattened leaves not inrolled at the edges nor heath-like.

It resembles *Phyllota*, in the absence of a strophiole, the stamens slightly but distinctly united to the corolla at the extreme base, but differs entirely in habit, leaves and the petals all about  $\frac{3}{8}$  inch long, and other features mentioned. The style and calyx persist, the ovate pointed pod having 2 seeds on short funicles.

#### URODON CAPITATUS, Turcz.

An erect shrub apparently 1-2 feet, leaves practically sessile, the stalks decurrent, glabrous, somewhat obtuse,  $\frac{1}{2}$  to  $\frac{2}{3}$  c.m. long, the leaves around the heads much larger and broader, more or less purple on the backs, forming a very distinct involucre.

Drummond, iv., No. 21, W.A. type; M. Koch, 1905, L. Monger and Watheroo, W.A., No. 1303 (involucral leaves still broader than the type).

#### URODON DASYPHYLLUS, Turcz.

This is distinguished by its shortly but distinctly stalked leaves, which are narrower, longer (1 cm. or more), pointed and hairy. The heads are usually single, but sometimes 2 or 3 are clustered together on short separate stalks, the involucral leaves, though sometimes a little longer, do not differ appreciably from the foliage leaves. This is the plant which has been generally known as *Pultenaea* or *Phyllota Urodon*. Various localities in W. Austr. The colour varies from yellow to reddish brown, the keel usually being darker.

Var. *ovalifolius*, n. var. This is usually short and condensed, 6 inches or so in height, the leaves shorter, broader, very hairy, densely set. A specimen of Drummond's from W.A. links this variety to the type form having the habit of the variety, but the more pointed and narrow leaves of the type. Wangering, W. Austr., R. Helms, 1891; Coolgardie, W. Austr., McPherson, 1895; Parker's R., W. Austr., Merral, 1892.

As the genus has not previously been figured, full figures of the variety are given.

EXPLANATION OF PLATES XXX.—XXXIII.

PLATE XXX.—Figs. 1 and 2, *Baeckea Eatoniana*, Ewart and White.

Fig. 1, petal and stamens. Fig. 2, vertical section of flower. Figs. 3-8, *Gnephosis Baracchiana*, Ewart and White.

Fig. 3, entire plant; 4, side view of receptacle and general involucre 5, the same from above; 6, single floret, separated from its bracts: 7, one of the outer; 8, one of the inner bracts from a floret.

PLATE XXXI.—*Olearia Toppi*, Ewart and White.

Fig. 1. Small piece of flowering branch.

Fig. 2. Disc floret, enlarged.

Fig. 3. Transverse section of leaf, highly magnified.

PLATE XXXII.—*Thysanotus Bentianus*, Ewart and White

Fig. 1, entire plant; 2, transverse section of leaf; 3, the same of *T. triandrus*.

PLATE XXXIII.—*Urodon dasyphyllus*, Turcz., var. *ovalifolius*, Ewart and White.

1. Complete plant. 2. Calyx and bracteoles. 3. (a) and (b) Standard with stamens attached. front and side view. 4. Wing with stamen attached. 5. Carina. 6. Ovary. 7. Ovary-opened to show one of the seeds. 8. Fruit within calyx.

ERRATUM.

Page 540, line 10: For VI.-IX. read XXX.-XXXIII.